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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/730,375	12/05/2000	Charles Simonyi	777.355US6	7330

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EXAMINER	
VO, TED T	

ART UNIT	PAPER NUMBER
2122	19

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/730,375	Applicant(s) SIMONYI, CHARLES
	Examiner Ted T. Vo	Art Unit 2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 May 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *16*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the Request Continuation Examination, filed on 11/24/03 for the amendment filed on 10/16/03. The amendment is now entered.

Claims 13, 16, 17, 20, 21, and 22 are amended.

Claims 13-24 are pending in the application.

Priority

2. It is noted that this application is filed under continuation of a US application serial No. 08/884,441 filed on 6/27/1997 (now US patent No. 6,189,143 B1) which is a divisional of a US application serial No. 08/431,049 file on 4/28/1995 (now US patent No. 6,097,888) which is CIP of an US application serial No. 08/145,689 filed on October 29, 1993 (now abandoned).

Claiming subject matters that are not supported in a parent because of filing continuation-in-part, **the effective filing date is the filing date of the child CIP**. In this case, the effective filing date is of the US application serial No. 08/431,049 file on 4/28/1995. See MPEP 2133.01.

Response to Amendment

3. The filing for continued examination under 37 CFR 1.114 is eligible, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

In response to the amendment, filed on 10/16/03, the previous rejection under 35 U.S.C. 102(b) as being anticipated by Aho et al., "Compilers, Principles, Techniques, and Tools" (1986), is withdrawn.

With the amendment of claims 21-24, the rejection of Claims 21-24 under 35 U.S.C. 101 in the previous action, is withdrawn. However, the amendment necessitates claims 22-24 rejected under 35 U.S.C. 112, second paragraph. See details in section 5 below.

The previous rejection under 35 U.S.C. 102(b) as being anticipated by Aho et al., "Compilers, Principles, Techniques, and Tools" (1986), is withdrawn. However, the amendment necessitates a new ground of rejection. See details in section 7 below.

Applicant's augments to the amended claims, particularly on claims 13, 17, and 21 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 22-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per Claims 22-24: Claims 22-24 are dependent on independent Claim 21. While Claim 21 is intended to one or more computer readable media, as stated in its preamble, the scope of Claims 22-24 directs to a data structure alone. The preamble stated in Claims 22-24 fails to connect to the dependency of independent Claim 21. It would require amending the preamble of Claims 22-24 similarly to the preamble stated in independent Claim 21.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 13-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Hendren et al., (hereafter: Hendren) "Supporting Array Dependence Testing for an Optimizing/Parallelizing C Compiler" (10/19/1993).

As per Claim 13:

Hendren discloses, "***One or more computer readable media*** (See page 312, Figure. 2, a McCat Environment) ***comprising computer executable instructions*** (See Figure. 2, 'SIMPLE') ***that, when executed, direct a computer to implement a method comprising:***

identifying (See Figure. 2, 'SIMPLE' and Points-to Analysis) ***a syntax-independent programming intent represented as a first node of a data structure*** (See page 10, in Figure 7(b), refer '*syntax-independent programming intent*' as to any node in the tree data structure. For example node: 'p');

identifying a second node of the data structure, the second node being referenced from the first node and containing data (See page 10, Figure 7(b), following the arrow from the node 'p' is the node with the number 4, where 4 is data); ***and***

identifying a unique name for code associated with the syntax-independent programming intent (See page 10, Figure 7(b), refer 'unique name' as 'p', and refer '*for code*' as p=4 [p 'arrows' 4]; or p=tem4-5 [p 'arrows' -]).

As per Claim 14:

Hendren discloses, "***One or more computer readable media as recited in claim 13, further comprising computer executable instructions that, when executed, direct the computer to implement the method further comprising executing the code identified by the unique name***"(See page 10, lines 1-11, it uses "induction processing function" to calculate the induction formula).

As per Claim 15:

Hendren discloses, "***One or more computer readable media as recited in claim 13 wherein the code comprises low level computational constructs*** (See page 10, Figure 7(b), with node 'p': p=4; and p=tem4 - 5 are low-level computational constructs).

As per Claim 16:

Hendren discloses, "***One or more computer readable media as recited in claim 13 wherein the first node*** (Figure 7(b), node 'p')***, the second node*** (Figure 7(b), node '4'; or node 'tem4')***, and additional nodes*** (Figure 7(b), such as node '*r', or 'q') ***of the data structure comprise a hierarchical tree of nodes that each represent a syntax-independent programming intent*** (Figure 7(b), the tree structure in the dashed box).

As per Claim 17:

Claim 17 is a method of handling data in which the claim recites limitation that has the claim functionality corresponding to the limitation recited in Claim 13. Therefore, Claim 17 is rejected in the same reason set forth in connecting to the rejection of Claim 13.

As per Claim 18:

Claim 18 is a method of handling data in which the claim recites limitation that has the claim functionality corresponding to the limitation recited in Claim 14. Therefore, Claim 18 is rejected in the same reason set forth in connecting to the rejection of Claim 14.

As per Claim 19:

Claim 19 is a method of handling data in which the claim recites limitation that has the claim functionality corresponding to the limitation recited in Claim 15. Therefore, Claim 19 is rejected in the same reason set forth in connecting to the rejection of Claim 15.

As per Claim 20:

Claim 20 is a method of handling data in which the claim recites limitation that has the claim functionality corresponding to the limitation recited in Claim 16. Therefore, Claim 20 is rejected in the same reason set forth in connecting to the rejection of Claim 16.

As per claim 21:

Hendren discloses, "***One or more computer readable media configured*** (See page 312, Figure. 2, a McCat Environment) ***to maintain a data structure*** (See page 10, in Figure 7(b)) ***that is a syntax-independent representation of a program, the data structure comprising:***

a first node (Figure 7(b), for example, node: 'p' in the dashed box) ***received as an input*** (Figure 7(b), for example, p=4 or p=tem4 - 5) ***and configured for display as a representation of a syntax-independent programming intent*** (tree structure of Figure 7(b));

a second node (Figure 7(b), for example, node: '4' in the dashed box or node '-') ***having data configured for manipulation when implementing the a syntax-independent programming intent; and***

wherein the first node has a unique identifier of the second node (See page 10, Figure 7(b), refer 'unique identifier' as 'p', and refer '*second node*' as '4'), ***and the first node uniquely identifies code for implementing the programming intent*** (See page 10, referring to p=4 [p 'arrows' 4]; or p=tem4-5 [p 'arrows' -]).

As per Claim 22:

Hendren discloses, "***A data structure recited in claim 21 wherein one or more additional nodes*** (See Figure 7(b); for example node 'q') ***comprises a hierarchical tree of nodes that are each received as an input*** (See Figure 7(b); for example, refer 'q' as a hierarchical of nodes under q in the dashed box and q is an input of *r=q) ***and configured for display as a representation of a syntax-independent programming intent*** (Figure 7(b); tree structure), ***and wherein each of the one or more additional nodes uniquely identify code for implementing the respective programming intent.***

As per Claim 23:

Hendren discloses, "***A data structure as recited in claim 22 wherein the one or more additional nodes comprise nodes selected from multiple different computational constructs*** (Figure 7(b); tree structure, referring to node '+' or '-').

As per claim 24:

Hendren discloses, "***A data structure as recited in claim 21, wherein the data structure further comprises:***

a node type tag and unique identifier pointing to implementation code (Figure 7(b); the tree structure with a node tem0, tem1... or tem4);

an optional data section; and a list of offspring of the node identified by the node type tag and a list of pointers to further nodes " (in this case, it is referred to a list of subscripts of nodes (see page 11, section 5.2) or a data structure in Canonical Form (see page 15)).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted T. Vo whose telephone number is (703) 308-9049. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM ET. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam, can be reached on (703) 305-4552.

The fax phone numbers:

(703) 872-9306 (for formal communication intended for entry);

(703) 746-5429 (for informal or draft communication, please label "PROPOSED" or "DRAFT").

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

TED T. VO

Patent Examiner
Art Unit: 2122
February 19, 2004